

Notice of Allowability

Application No.

10/727,018

Examiner

Gordon J. Stock

Applicant(s)

MCARTHUR ET AL.

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to correspondence filed 8/25/05.
2. ☒ The allowed claim(s) is/are 1-18,45-53.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Gregory J. Thibault, Jr.
Supervisory Patent Examiner

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on August 25, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,573,986 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Election/Restrictions

2. This application is in condition for allowance except for the presence of **claims 19-44** non-elected without traverse. Accordingly, **claims 19-44** have been cancelled.

Allowable Subject Matter

3. **Claims 1-18 and 45-53** are allowed.

4. The following is an examiner's statement of reasons for allowance:

As to **claim 1**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method of determining intra-field distortion in a projection imaging tool the particular second step of producing an exposure of the reticle pattern on the substrate in a second position wherein an alignment attribute exposed during the first exposure and an alignment attribute exposed during the second exposure form a completed alignment attribute, in combination with the rest of the limitations of **claims 1-14**.

As to **claim 15**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method of determining intra-field distortion in a projection imaging tool the particular second step of producing an exposure of the reticle pattern on the substrate in a second position wherein an alignment attribute exposed during the first exposure and an alignment

attribute exposed during the second exposure form a completed alignment attribute, in combination with the rest of the limitations of **claims 15-16**.

As to **claim 17**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method of determining x-tilt and y-tilt Zernike coefficients the particular second step of producing an exposure of the reticle pattern on the substrate in a second position wherein an alignment attribute exposed during the first exposure and an alignment attribute exposed during the second exposure form a completed alignment attribute, in combination with the rest of the limitations of **claims 17-18**.

As to **claim 45**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method of determining intra-field distortion in a projection imaging tool the particular second step of producing an exposure of the curved field reticle pattern on the substrate in a second position wherein the exposure of the reticle pattern in the second position overlaps the reticle pattern in the first position and is shifted in a desired direction an amount that corresponds to the offset, in combination with the rest of the limitations of **claims 45-53**.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Applicant's arguments, see Remarks, filed August 25, 2005, with respect to the rejection of claims 1-14 and 45-53 under 35 U.S.C. 102(e) in the previous office action have been fully considered and are persuasive. The rejection of the claims under 35 U.S.C. 102(e) has been

Art Unit: 2877

withdrawn. Due to the submission of the terminal disclaimer on August 25, 2005 the rejection of claims 1-4, 6, 7, and 8-13 under non-obviousness type double patenting has been traversed. Due to the amendment of claims 16 and 18, the previous rejection under 35 U.S.C. second paragraph has been traversed.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent 5,615,006 to Hirukawa et al.

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Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (571) 273-8300

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431.

The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

Art Unit: 2877

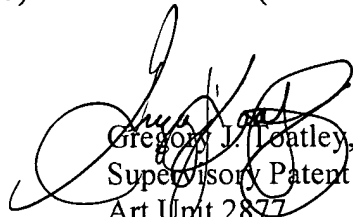
supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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November 9, 2005



Gregory J. Toatley, Jr.
Supervisory Patent Examiner
Art Unit 2877
9/11/05